REMARKS

Favorable reconsideration of this application, in light of the following discussion, is respectfully requested.

Claims 1-9 are pending and under consideration.

I. Rejection under 35 U.S.C. § 103

In the Office Action, at pages 2-5, claims 1-4 and 7-9 were rejected under 35 USC § 103(a) as being unpatentable over Arenson et al. (U.S. Patent No. 6,304,769) in view of Kucharczyk et al. (U.S. Patent No. 6,298,259) or Hanley et al. (U.S. Patent App. Pub. No. 2003/0191385).

Arenson et al., Kucharczyk et al., and Hanley et al., alone or in combination, do not discuss, suggest, or make obvious:

> a magnetic field generating assembly operable in a first mode to generate a first magnetic field in a working volume located outside the assembly, the first magnetic field being suitable for use in a catheter steering procedure, and in a second mode to generate a second, static magnetic field in the working volume suitable for conducting a magnetic resonance imaging process (MRI), the second magnetic field being more uniform in the working volume than the first magnetic field; and a catheter having a magnetic seed attached whose orientation, and hence the steering direction of the catheter, is determined by interaction with the first magnetic field,

as recited in independent claim 1. The invention of claim 1 provides a catheter having a magnetic seed attached. The magnetic seed can maintain a magnetic field and allows the steering direction of the catheter to be determined by interaction with the first magnetic field. Since the magnetization direction can be maintained by the seed, electrical current can be turned off, thus reducing power consumption and reducing unnecessary interaction between the leads carrying the electrical current and the surrounding magnetic field. In contrast, the catheter of Arenson et al. has a simple coil arrangement that is either on or off depending on whether or not electric current is applied (see Arenson et al., col. 11, lines 26-43). As such, Arenson et al. does not provide for maintaining a magnetic field and allowing a steering direction of the catheter to be determined by interaction with a magnetic field. It is respectfully requested that the Examiner address this argument and indicate the portion of Arenson et al. that discloses a catheter having a magnetic seed attached such that the steering direction of the catheter, is determined by interaction with the first magnetic field.

Furthermore, the invention of claim 1 provides that the working volume is located outside of the assembly. As shown in Fig. 2 of the drawings of the present invention, the working volume 7 is offset from the envelope of the magnetic field generating assembly that is defined by the coils 1-6. The Examiner acknowledges that Arenson et al. does not teach that the working volume is located outside of the assembly. The Examiner attempts to make up for this deficiency in Arenson et al. with either Kucharczyk et al. or Hanley et al. However, this is submitted to be incorrect as neither Kucharczyk et al. nor Hanley et al. discuss or suggest this feature of claim 1. Kucharczyk et al., as relied on by the Examiner, does not provide a working volume located outside of the assembly, but instead provides two different magnetic field generating assemblies that each have their own working volume. More specifically, Kucharczyk et al. provides a first MRI assembly for performing MRI imaging and a separate magnetic stereoaxis assembly for guidance of medical devices. Therefore, while Kucharczyk et al. may provide for a patient to be transported between the two different assemblies, each of the two different working volumes are still located within the respective assemblies. In contrast, claim 1 provides a single magnetic field generating assembly that is operable in two modes, wherein the working volume is located outside of the assembly. Thus, Kucharczyk et al. fails to make up for the deficiencies in Arenson et al. with respect to claim 1.

With respect to Hanley et al., it is also submitted that Hanley et al. fails to make up for the deficiencies in Arenson et al. with respect to claim 1. To begin with, Applicants note that the portions of Hanley et al. designated by the Examiner do not appear to correspond to the published document. The Examiner refers to p. 1, l. 25 through p. 2, l. 35 and to p. 6, l. 6 through p. 7, l. 16. However, it is noted that the published Hanley et al. reference contains paragraph numbers and not line number and, furthermore, does not include a page 6 or a page 7, as mentioned by the Examiner. **For this reason alone, the current Office Action is defective. Thus, Applicants respectfully request that any subsequent Office Action be made non-final.** Nonetheless, a reading of Hanley et al. clearly indicates that Hanley et al. is directed to a catheter assembly and is not generally concerned with a magnetic field generating assembly. Therefore, Hanley et al. mentions nothing about a working volume being located outside of a magnetic field generating assembly. Thus, Hanley et al. fails to make up for the deficiencies in Arenson et al. with respect to claim 1.

Since Arenson et al., Kucharczyk et al., and Hanley et al., alone or in combination, do not discuss, suggest, or make obvious all of the features of the invention of claim 1, claim 1 patentably distinguishes over the cited references. Accordingly, withdrawal of this § 103(a) rejection is respectfully requested.

Claims 2-4 and 7-8 depend either directly or indirectly from claim 1, and include all the features of claim 1, plus additional features that are not discussed or suggested by the reference relied upon. Therefore, claims 2-4 and 7-8 patentably distinguish over the reference relied upon for at least the reasons noted above. Accordingly, withdrawal of these § 102(e) rejections is respectfully requested.

Arenson et al., Kucharczyk et al., and Hanley et al., alone or in combination, do not discuss, suggest, or make obvious:

> providing an imaging and catheter steering assembly comprising a magnetic field generating assembly operable in a first mode to generate a first magnetic field in a working volume located outside the assembly, the first magnetic field being suitable for use in a catheter steering procedure, and in a second mode to generate a second, static magnetic field in the working volume suitable for conducting a magnetic resonance imaging process (MRI), the second magnetic field being more uniform in the working volume than the first magnetic field; and a catheter having a magnetic seed attached whose orientation, and hence the steering direction of the catheter, is determined by interaction with the first magnetic field; inserting the catheter into a body; steering the catheter through the body by selectively operating the assembly in the first mode; and obtaining an image of part of the body by operating the assembly in the second, imaging mode,

as recited in independent claim 9, so that claim 9 patentably distinguishes over the cited references. Accordingly, withdrawal of this § 103(a) rejection is respectfully requested. For example, claim 9 provides that the working volume is located outside of the assembly and that the catheter has a magnetic seed that can maintain a magnetic field and can allow the steering direction of the catheter to be determined by interaction with the first magnetic field.

In the Office Action, at page 5-6, dependent claims 5-6 were rejected under 35 USC § 103(a) as being unpatentable over Arenson et al. in view of Kucharczyk et al. or Hanley et al and further in view of Breneman et al. (U.S. Patent No. 5,412,363) and McDougall et al. (U.S. Patent No. 5,680,044), respectively.

As discussed above, Arenson et al., Kucharczyk et al., and Hanley et al., alone or in combination, do not discuss, suggest, or make obvious all of the features of the invention of claim 1. Neither Breneman et al. nor McDougall et al. make up for the deficiencies. Therefore claim 1 patentably distinguishes over Arenson et al., Kucharczyk et al., Hanley et al., Breneman et al., and McDougall et al., and any combination thereof.

Claims 5-6 depend either directly or indirectly from claim 1, and include all the features of claim 1, plus additional features that are not discussed or suggested by the references relied upon. Therefore, claims 5-6 patentably distinguish over the references relied upon for at least the reasons noted above. Accordingly, withdrawal of these § 103(a) rejections is respectfully requested.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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